

## Appendix E: Proposed Action

### Alternative 2 – Proposed Action

This appendix is provided to give a quick overview of the proposed action, more information can be found in Chapters 1 and 2 of the EA.

This alternative 2, the proposed action, was developed to maximize attainment of the purpose and need while meeting agency and Forest Plan requirements. Alternative 2 emphasizes moving the project area toward Forest Plan desired conditions.

Appendix A is a spreadsheet of proposed vegetation management treatments for each stand in Alternative 2. The amount of a particular activity outlined in Appendix A (acres), and the locations depicted on maps in Appendix I are approximate, based on inventory and survey estimates. The vegetation management table displays stand acres for each stand; these acres may be adjusted due to on-the-ground conditions at the time of implementation. Typically, the on-the-ground conditions will reduce the actual activity acres. In some cases, the implemented stand acres are less than the stand acres in order to protect water, fish, wildlife, plants, or because a particular portion of the stand does not lend itself to the proposed silvicultural treatment. The actual figures could change during preparation for a timber sale based on such things as avoidance of site-specific areas that are too small to show up at the scale of maps used for display, small inclusions of inoperable terrain, non-uniform stand structure, or slight refinements in the amount of road construction or reconstruction that may be needed.

Table EA-1 below shows the number of acres of various treatments for different tree species.

**Table EA-1.** Vegetation treatment acres by species

Treatment (acres)	Aspen	Balsam Fir	White Pine	Hardwood/Hemlock	Jack Pine	Red Oak	Paper Birch	Red Pine	White Spruce	Total
Removal	45	166	16	5	0	0	0	0	0	232
Clearcut/Coppice	1053	73	0	37	13	0	0	8	6	1190
Improvement	0	0	0	263	0	0	0	0	0	263
Selection	0	0	0	5130	0	39	0	0	0	5249
Shelterwood	0	0	42	0	17	84	253	6	0	403
Thin	186	11	407	43	11	98	139	2325	193*	3331
Restoration	25	0	0	0	4	4	0	147	0	181
Salvage/Sanitation	27	0	13	0	33	114	0	0	40	227
Pre-Commercial Thin	0	0	29	0	0	0	0	63	0	92
Experiments	0	0	0	526	0	0	0	0	0	526
<b>Total</b>	<b>1336</b>	<b>250</b>	<b>507</b>	<b>5979</b>	<b>78</b>	<b>339</b>	<b>392</b>	<b>2549</b>	<b>239</b>	<b>11669</b>

### Variation of Forest Plan guideline for created openings greater than 40 acres

Alternative 2 includes a minor variation from a Forest Plan guideline (i.e. clearcutting over 40 acres). This variation would not require a Forest Plan amendment.

Specifically, there are eight aspen or mixed aspen, paper birch, and balsam fir stands that would be combined to create harvest units greater than 40 acres in size (see Table EA-2). These forest stands need harvest treatment to meet the purpose and need of this project. To ensure the Forest Service minimizes forest fragmentation (maintain forest connectivity) and still resolves the issue of forest resiliency in the Fourmile project area, it is necessary to create temporary openings that exceed 40 acres in certain areas. The Forest is allowed to create temporary openings greater than 40 acres after project level analysis, 60 days of public notice, and review and approval by the Regional Forester.

Table EA-2 below gives information about these 8 stands. These stands total 351 acres. 124 acres are in Management Area 2A, 49 acres in 4A, and 178 acres in 4B.

**Table EA-2.** Aspen units proposed for clearcut harvests greater than 40 acres.

Compartment	Stand	Acres	MA**	BA**	DBH**	Age
2189	14	49	4A	153	10	40
2211	5	124	2A	-	-	45
2219	13	102	4B	129	9	49
2218	20*	5	4B	133	10	52
	30*	27	4B	100	8	42
	31*	10	4B	127	10	57
	41*	26	4B	107	10	62
	35*	8	4B	160	10	42

\* The 5 starred (\*) stands in Compartment 2218 are adjacent to each other and would be combined into a single stand of 76 acres. Each of the unstarred stands would be its own harvest unit.

\*\*MA = Management Area; BA = basal area; DBH = diameter at breast height

Deviating from the Forest Plan guidance of no clearcutting over 40 acres is being pursued to treat over mature aspen, increase forest health, and meet Forest Plan desired future conditions. This treatment would retain aspen populations at a level which is prescribed in the Forest Plan (i.e. lower amounts of older, dying aspen, and increase younger aspen that is beneficial for many wildlife species like ruffed grouse and golden-winged warbler). For the Fourmile project, clearcutting these areas would meet the need to promote healthy aspen stands and aid in moving the project area's age class distribution toward Forest Plan desired conditions.

The effects of this Forest Plan guideline deviation are described in the vegetation section, Section 3.4 of this EA, under the analysis of Alternative 2. Also, throughout

Chapter 3 of the EA the impacts to other resources like wildlife, soils, and recreation are outlined. More detail is contained in the resource reports found in the project record.

If the Forest Service were not able to deviate from this guideline, these large clearcuts would be sub-divided by approximately 10-acre “leave areas” or aspen shelterwoods (underplanting white pine for regeneration). These leave areas would add up to an approximate 60 acres and increase forest fragmentation and edge habitat. More detail can be found in the Vegetation report in the project record.

The request to deviate from the Forest Plan was submitted to the USFS Region 9 regional office to the Regional Forester on January 29, 2020 and, after review, was approved on March 4, 2020.

### Red Pine Plantations – Potential Alternative Treatment

Many red pine plantations within this project area were planted by the Civilian Conservation Corp (CCC). This effort was to help reforest the landscape after the great cut over in the late 1800s and early 1900s. Many of these plantations were not placed in areas typically known for red pine; however, since red pine was easy to plant, cheap, and readily available, this was the primary species planted. When red pine is planted on sites where it normally doesn’t grow, it tends to grow poorly and be less resilient to insect and disease issues. Due to this issue, some red pine plantations will need to receive their final harvest within the Fourmile project area.

If the silviculturist feels that the best course of action is to regenerate the stand, they will recommend that change to the interdisciplinary team. This change in prescription may occur on as many as 1,327 acres of red pine stands within the project area. This number was determined based on the number of red pine stands, over the age of 80, within the Fourmile project area that Alternative 2 proposes receive a thinning treatment.

**Table EA-3.** Range of red pine age class distribution

Range of Potential Red Pine Age Class Distribution within the Fourmile Project Area				
Red Pine Age Class	Desired Condition	Existing Condition	After Alternative 2 Implemented Condition	If all Red Pine stands over 80 (that were in the original proposed action) received a final harvest**
0-20	10-20%	1%	6%	40%
21-60	25-35%	32%	31%	31%
61-100	25-35%	52%	50%	16%
101+	20-30%	14%	13%	13%

\*\* These numbers are based on what would occur if all red pine stands over age 80, in the proposed action, would receive a final harvest. This scenario is extremely unlikely.

### Purpose and Need Connection to Proposed Action

The following actions were designed to move the project area toward desired conditions while meeting Forest Plan goals, objectives, standards, and guidelines.

The following table displays the proposed action items and what needs they achieve.

<b>Table EA-4. *Proposed Action (Alternative 2) and What 'Need' They Achieve</b>	
<b>1: Need 1: Reduce stocking levels in overstocked forested stands</b>	<b>Acres</b>
Hardwood Forests	6,004
Conifer Forests (thinned)	3,496
Paper Birch Forests (thinned)	139
<b>2: Need 2: Maintain or move northern hardwoods toward an uneven-aged condition while maintaining or enhancing within stand species diversity</b>	<b>Acres</b>
Selection/Improvement Harvest	5,433
Canopy Gaps Created	5,169
<b>Need 3: Improve the age class distribution</b>	<b>Acres</b>
Change Aspen Age Class	1,151
Change Oak Age Class	242
Change Birch Age Class	253
Change Conifer Age Class	645
<b>Need 4: Improve tree species composition</b>	<b>Percent</b>
Change in Aspen Forest	-4%
Change in Balsam Fir Forest	-1%
Change in Paper Birch Forest	-29%
Change in Jack Pine Forest	-1%
Change in Red/White Pine Forest	+4%
Change in Hardwood Forest	+4%
Change in Oak Forest	+5%

<b>Table EA-4. *Proposed Action (Alternative 2) and What 'Need' They Achieve</b>	
Change is Spruce Forest	-1%
Need 5: Initiate, maintain, or enhance forest research studies in the project area	<b>Count</b>
# of Studies Continuing	4
Need 6: Utilize Commercial Harvest as the Preferred Tool to Achieve Project Objectives	<b>MMBF</b>
Timber Volume Offered	45.42
Need 7: Build and maintain safe, efficient, and effective infrastructure that supports public and administrative uses of National Forest System lands	<b>Miles</b>
New Permanent Road Construction	1.2
New Temporary Road Construction	0.2
Road Reconstruction	46.4
Road Decommission	147.2
Road Conversion to Trail	48.9
Close to Public, Remove from MVUM	1.0
Add Road to System	51.6
Need 8: Reduce hazardous fuels within communities at risk	<b>Acres</b>
Ladder Fuel Reduction	229
Prescribed Burning for Regeneration or Restoration Purposes	334
Need 9: Maintain the Scott Creek, Kimball Creek, and Nine-mile Hunter Hiking Trails and Associated Wildlife Openings	
Trails Maintained	36.1 miles
Existing Openings Maintained	134 acres

\* Definitions and descriptions of activities are contained in Appendix G – Glossary & Acronyms.